

Attorney Docket: 15164
Serial No.: 10/083,666
Filed: February 27, 2002

In the Claims:

Please amend the claims as follows:

1. (Currently amended) A method for cooling a seal located in a wall of a seal chamber and through which a movable shaft passes, said seal being heated by hot pressurized vapor that leaks through a labyrinth into the seal chamber and internal friction, said method comprising the steps of: (a) providing a seal chamber in which the seal is located and into which said hot pressurized vapor leaks; (b) injecting cool liquid into the seal chamber in which the seal is located; (c) cooling and condensing said hot pressurized vapor in said seal chamber thus cooling the seal and reducing the pressure in the seal chamber and producing condensate; (d) supplying liquid containing said condensate from said seal chamber to a seal chamber condensate drainage vessel for collecting only liquid containing said condensate produced in said seal chamber; and (e) pumping liquid containing the collected condensate from said seal chamber condensate drainage vessel to an exit of a condenser.

2. (Currently amended) A method according to claim 1 comprising the step of providing a pressure chamber for containing the hot pressurized vapor within which a turbine wheel is mounted on said shaft, and vapor ~~least~~ leaks past said labyrinth mounted on the shaft between the turbine wheel and the seal.

3. (Original) A method according to claim 2 comprising the

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step of adding the liquid to the chamber in which the seal is located by injecting the liquid into said chamber near a disc mounted in the chamber, said disc being mounted on, and rotatable with, said shaft.

4. (Original) A method according to claim 1 for use in a power plant that includes a vaporizer for vaporizing a working fluid, a turbine mounted on said shaft for expanding the working fluid, a condenser for condensing expanded working fluid, and a cycle pump for returning condensate from the condenser to the vaporizer, and comprising the step of supplying the liquid exiting said chamber in which the seal is located via a vessel to a line exiting said condenser and connected to said cycle pump.

5. (Original) A method according to claim 4 comprising the step of adding the liquid to th chamber in which the seal is located from output of the cycle pump.

6. (Currently amended) Apparatus for cooling a seal located in a wall of a seal chamber and through which a movable shaft passes, said seal being heated by hot pressurized vapor that leaks through the seal into the seal chamber and internal friction, said apparatus comprising: (a) a seal chamber in which the seal is located and into which leaks the hot pressurized vapor; (b) means for injecting liquid into the seal chamber in which the seal is located such that the hot pressurized vapor is cooled and condenses

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in said seal chamber, thus cooling the seal and producing condensate; (c) a line that supplies liquid containing said condensate from said seal chamber to a seal chamber condensate drainage vessel for collecting only liquid containing said condensate produced in said seal chamber; and (d) a pump that supplies liquid containing the collected condensate from said seal chamber condensate drainage vessel to an exit of a condenser.

7. (Original) Apparatus according to claim 6 comprising a turbine wheel mounted on said shaft in a pressure chamber containing hot pressurized, vaporized working fluid, wherein said shaft passes through a labyrinth seal mounted on the shaft.

8. (Original) Apparatus according to claim 7 comprising means for adding the liquid to the chamber in which the seal is located near a disc in the chamber mounted on the shaft and rotatable therewith.

9. (Original) Apparatus according to claim 6 further comprising a vaporizer for vaporizing a working fluid, a turbine mounted on said shaft for expanding the working fluid, a condenser for condensing expanded working fluid, a cycle pump for returning condensate from the condenser to the vaporizer and means for supplying the liquid exiting said chamber in which the seal is located via a vessel to a line exiting said condenser and connected to said cycle pump.

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10. (Original) Apparatus according to claim 9 comprising supplying means for supplying the liquid from the output of said cycle pump to said chamber in which the seal is located via said means for injecting liquid into the chamber.

11. (Previously presented) Apparatus according to claim 7 wherein said working fluid comprises an organic working fluid.

12. (Previously presented) Apparatus according to claim 9 wherein said working fluid comprises an organic working fluid.